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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/661,265	09/12/2003	Ramanathan T. Jagadeesan	062891.1177	7796

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BAKER BOTTS L.L.P.
2001 ROSS AVENUE
SUITE 600
DALLAS, TX 75201-2980

EXAMINER

CUMMING, WILLIAM D

ART UNIT	PAPER NUMBER
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2683

DATE MAILED: 06/07/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/661,265

Applicant(s)

JAGADEESAN & NGUYEN

Examiner

WILLIAM D CUMMING

Art Unit

2683

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 March 2005.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-59 is/are pending in the application.
- 4a) Of the above claim(s) 49 and 50 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1,7-19,23-35 and 38-42 is/are allowed.
- 6) ☒ Claim(s) 2-6,20-22,36,37,43-48 and 52-56 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12 September 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 3/15/05
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

Election/Restrictions

1. Applicants are reminded that upon the cancellation of claims to a non-elected species, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

2. Claims 1, 15, 35, and 51 generic and allowable. Accordingly, the restriction requirement as to the encompassed species is hereby withdrawn and claims 4-6, 15, 16, 31-32, 41, 42, 54-56, and 58 are no longer withdrawn from consideration since all of the claims to this species depend from or otherwise include each of the limitations of an allowed generic claim. However, claims 49-50, remain withdrawn from consideration since claim 43 is not allowed depend upon or otherwise include all the limitations of an allowed generic claim as required by 37 CFR 1.141.

3. In view of the above noted withdrawal of the restriction requirement as to the linked species, applicants are advised that if any claims depending from or including all the limitations of the allowable generic linking claims be presented in a continuation or divisional application, such claims may be subject to provisional statutory and/or nonstatutory double patenting rejections over the claims of the instant application. Once a restriction requirement is withdrawn, the provisions of 35 U.S.C. 121 are no longer applicable. See *In re Ziegler*, 44 F.2d 1211, 1215, 170 USPQ 129, 131-32 (CCPA 1971). See also MPEP § 804.01.

Drawings

4. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the dwell timer as stated by claims 2, 20, 36, 44, and 52 must be shown or the feature canceled from the claim(s). No new matter should be entered.

5. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate

changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

6. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

7. Claims 43-48 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

The specification fails to provide an enabling disclosure of the code as stated by claims 43. The specification only disclose the software embedded in a computer readable medium in the mobile station, yet the steps or functions of the handoffs in claims 43 and 45 is done by the network not the mobile station.

Since this code is only known to the inventors, it is not enabling how a software

code in the mobile phone can do the steps or functions of hand off. In computer applications, it is not unusual for the claimed invention to involve two areas of prior art or more than one technology, e.g., an appropriately programmed computer and an area of application of said computer. *White Consol. Indus.*, 214 USPQ at 821. In regard to the "*skilled in the art*" standard, in cases involving both the art of computer programming, and another technology, the examiner must recognize that the knowledge of persons skilled in both technologies is the appropriate criteria for determining sufficiency. See *In re Naquin*, 398 F.2d 863, 158 USPQ 317 (CCPA 1968); *In re Brown*, 477 F.2d 946, 177 USPQ 691 (CCPA 1973); and *White Consol. Indus. v. Vega Servo-Control, Inc.*, 214 USPQ 796, 822 (S.D.Mich. 1982), *aff'd on related grounds*, 713 F.2d 788, 218 USPQ 961 (Fed. Cir. 1983). In a typical computer application, system components are often represented in a "*block diagram*" format, i.e., a group of hollow rectangles representing the elements of the system, functionally labeled, and interconnected by lines. Such block diagram computer cases may be categorized into (A) systems which include but are more comprehensive than a computer and (B) systems wherein the block elements are totally within the confines of a computer. The first category of such block diagram cases involves systems which include a computer as well as other system hardware and/or software components. In order to meet his or her burden of establishing a reasonable basis for questioning the adequacy of such disclosure, the examiner should initiate a factual analysis of the system by focusing on each of the individual block element components.

More specifically, such an inquiry should focus on the diverse functions attributed to each block element as well as the teachings in the specification as to how such a component could be implemented. Based on such an analysis, the examiner has reasonably contend that more than routine experimentation would be required by one of ordinary skill in the art to implement such a component or components, that component or components is specifically be challenged by the examiner as part of this 35 U.S.C. 112, first paragraph rejection. Additionally, the examiner has determine whether certain of the hardware or software components depicted as block elements are themselves complex assemblages which have widely differing characteristics and which must be precisely coordinated with other complex assemblages. Under such circumstances, a reasonable basis does exist for challenging such a functional block diagram form of disclosure. See *In re Ghiron*, 442 F.2d 985, 169 USPQ 723 (CCPA 1971) and *In re Brown, supra*. Moreover, even if the applicants has cited prior art patents or publications to demonstrate that particular block diagram hardware or software components are old, it should not always be considered as self-evident how such components are to be interconnected to function in a disclosed complex manner. See *In re Scarbrough*, 500 F.2d 560, 566, 182 USPQ 298, 301 (CCPA 1974) and *In re Forman*, 463 F.2d 1125, 1129, 175 USPQ 12, 16 (CCPA 1972).

Furthermore, in complex systems including a digital computer, a microprocessor, or a complex control unit as one of many block diagram elements, timing between various system elements may be of the essence and without a timing

chart relating the timed sequences for each element, an unreasonable amount of work may be required to come up with the detailed relationships an applicant alleges that he or she has solved. See *In re Scarbrough*, 500 F.2d at 566, 182 USPQ at 302. For example, in a block diagram disclosure of a complex claimed system which includes a microprocessor and other system components controlled by the microprocessor, a mere reference to a prior art, commercially available microprocessor, without any description of the precise operations to be performed by the microprocessor, fails to disclose how such a microprocessor would be properly programmed to either perform any required calculations or to coordinate the other system components in the proper timed sequence to perform the functions disclosed and claimed. If, in such a system, a particular program is disclosed, such a program should be carefully reviewed to ensure that its scope is commensurate with the scope of the functions attributed to such a program in the claims. See *In re Brown*, 477 F.2d at 951, 177 USPQ at 695. Since, the disclosure fails to disclose any program and more than routine experimentation would be required of one skilled in the art to generate such a program, the examiner clearly has a reasonable basis for challenging the sufficiency of such a disclosure.

8. Claims 2, 3, 4, 5, 6, 20, 21, 22, 36, 37, 44, 45, 52, 53, 54, 55, and 56 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

The specification inadequately describes the dwell timer as stated by claims 2, 20, 36, 44, and 52. The "*written description*" of the invention required by first paragraph of 35 USC §112 is separate and distinct from that paragraph's requirement of enabling disclosure, since description must do more than merely provide explanation of how to "*make and use*" the invention. Applicant must also convey, with reasonable clarity to those skilled in the art, that applicant, as of the filing date sought, was in possession of the invention, with the invention being, for purpose of "*written description*" inquiry, whatever is presently claimed. Drawings alone may, under proper circumstances, provide "*written description*" of the invention required by 35 USC §112, and whether the drawings are from design application or utility application is not determinative. In order to satisfy "*written description*" requirement of 35 USC §112, the proper test is whether drawings conveys, with reasonable clarity to those of ordinary skill in the art, the claim subject matter.

Allowable Subject Matter

9. Claims 1, 7-19, 23-35, 38-42, 51, and 57-59 are allowed.
10. As allowable subject matter has been indicated, applicant's reply must either comply with all formal requirements or specifically traverse each requirement not complied with. See 37 CFR 1.111(b) and MPEP § 707.07(a).
11. The following is a statement of reasons for the indication of allowable subject matter:

The prior art of record does disclose a method for handing off a call between networks, comprising monitoring a quality of a first link between a mobile station and a wireless local area network (WLAN) when the mobile station is actively connected with the WLAN on a call. Monitoring a quality of a second link between the mobile station and a cellular network when the mobile station is actively connected with the WLAN on the call and handing off the call from the WLAN to the cellular network and when the quality of the second link is greater than a minimum cellular link quality threshold. The prior art of record does not disclose of make obvious and the only reason for allowance is the claimed when the quality of the first link is less than a handoff trigger threshold for a drop count duration. The examiner took drop count is for only to mean a certain count of sample intervals.

Conclusion

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Moreau, et al disclose in a multicellular radio communications network, when a mobile station satisfies a criterion for automatic intercellular handover from a source cell to a target cell, the speed of movement of the mobile station with respect to the base station of the target cell is estimated on the basis of the measured levels of the signal which the mobile station has received from this base station before the handover criterion is satisfied. Depending on the layers of the cells concerned, it is then possible to take account of this speed estimate in order to decide whether or not to trigger intercellular handovers.

Trompower, et al show a cellular communication system hand-off protocol which helps minimize down time associated with a mobile device roaming among different cells in which different cells employ different communication channels (e.g., different frequency hopping sequences). In a preferred embodiment, each base station is configured to communicate its own particular hopping sequence to all other base stations via the system backbone. Each base station then provides to mobile devices which are registered thereto information regarding the particular hopping sequences employed by other base stations servicing cells into which the mobile device may roam. Such information includes the particular hopping sequences together with an indication of what location in the sequence the base stations are currently at in any given time. In

addition, such information may include an indication of the intervals at which a base station is configured to transmit a beacon packet (for passive scanning operation), or at what intervals test pattern packets are transmitted to allow for signal quality evaluation.

Bahl discloses interfaces between wireless network hardware and software can provide for wireless-specific functionality and allow software to take advantage of the unique capabilities of a wireless network. These interfaces can perform static queries, dynamic queries, or a request to set attributes. Static queries can be information which does not change depending on the wireless connection, dynamic queries will attempt to obtain information based on the current wireless connection maintained by the hardware, and setting attributes allows the software components to change parameters within the hardware components. Additionally, callback functions are provided to allow the wireless network hardware to alert software to key events.

Bridgelall shows a Mobile Station (MS) is able to vertically roam in either direction between two different network, i.e. WWAN and WLAN. The MS is equipped with a dual mode Radio for WWAN and WLAN transmissions. The WLAN Radio is linked to a WLAN Enterprise Gateway Controller (EGC) via a first air link and the WWAN Radio is linked to a WWAN Base Transceiver Station (BTS) via a second air link. The EGC is connected to a Mobile Switching Center (MSC) which is in turn connected to the BTS. An outgoing VoIP call from the WLAN Radio to a remote party on the WWAN will transition or seamlessly switch

over to a WWAN connection when the MS detects packet error rates, frequent scale back or consistent signal degradation. Upon such conditions, the WLAN Radio requests the EGC to request an Explicit Call Transfer via the MSC to the MS integrated WWAN Radio portion which automatically accepts the call based on referenced information stored in the user's subscriber identification module (SIM). Once the WWAN Radio is confirmed connected to the remote party on the WWAN, the WLAN Radio drops the WLAN connection. An incoming call between the MS and a remote user via the WWAN will transition to the WLAN Radio when the MS enters WLAN coverage. The MS issues an ECT to the WLAN. After user verification by the WLAN Radio and the EGC signals acceptance of the call, the WWAN Radio connection is dropped and the call is now established between the WLAN Radio and the remote party on the WWAN.

Sundar, et al teach a method, system and apparatus for internetworking a WWAN and a WLAN. More specifically, a method, system and apparatus for providing WWAN services to a mobile station serviced by a WLAN. An MSC is provisioned to serve a WLAN. The MSC that serves the WLAN receives WWAN messages that provide a WWAN service. The MSC forms SIP messages using the received WWAN messages and delivers the SIP messages to the WLAN via an IP link. The WLAN delivers the SIP messages to the mobile station via a WLAN air interface protocol. Under one embodiment, the WWAN service is a Short Message Service (SMS). Under another embodiment, the WWAN service is a Message Wait Notification (MWN). Under another embodiment, an MSC that

services the WLAN and an MSC servicing the WWAN cooperate to provide TFO call services between an mobile station operating in the WLAN and a mobile station operating in the WWAN.

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **WILLIAM D CUMMING** whose telephone number is 571-272-7861. The examiner can normally be reached on Tuesday & Wednesday, 10:30am to 8:30pm,.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William Trost can be reached on 571-272-7872. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

14. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


WILLIAM D CUMMING
Primary Examiner
Art Unit 2683

Wdc



UNITED STATES
PATENT AND
TRADEMARK OFFICE

William Cumming
Primary Patent Examiner
William.Cumming@uspto.gov